

Preventive Power of Education in Combating Child Marriage in India

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Abstract

Child marriage remains one of the most entrenched barriers to gender equality and human development in India, even as national prevalence has declined significantly over the past two decades. NFHS-5 (2019–2021) records that 23.3% of women aged 20–24 were married before age 18, a substantial drop from 47.4% in NFHS-3 (2005–06), yet approximately 1.5 million girls continue to enter child marriage each year [1]. Among all documented protective factors, continued secondary education emerges as the single most powerful, consistent, and cost-effective preventive mechanism. This review synthesises evidence from nationally representative surveys, district-level analyses, longitudinal studies, randomised evaluations, and systematic reviews published up to 2023. It demonstrates that each additional year of secondary schooling is associated with a 6–11 percentage point reduction in the probability of child marriage, while full secondary completion is linked to risk reductions of 60–80% compared with no schooling [7,8,9,10]. The analysis distinguishes three interlocking pathways through which education operates: behavioural (prolonged retention physically removes girls from the marriage market during peak risk years), cognitive (acquisition of legal awareness, negotiation skills, and reproductive knowledge), and affective/normative (transformation of personal aspirations and community expectations). Quality moderators—active retention mechanisms, gender-transformative curricula, and community legitimacy consistently differentiate high-impact programmes from those with limited or short-lived effects. Interstate heterogeneity, persistent structural barriers, and post-pandemic setbacks are critically examined. The review concludes that translating education’s preventive potential into large-scale impact requires deliberate policy movement beyond enrolment targets toward high-quality, retention-focused, gender-transformative secondary schooling supported by financial incentives, community engagement, and robust real time monitoring. Sustained investment in adolescent girls’ secondary education offers the highest return for accelerating progress toward SDG 5.3 by 2030.

Keywords— *child marriage prevention, girls’ secondary education, school retention, conditional cash transfers, gender norms, NFHS-5, adolescent empowerment, India*

I. INTRODUCTION

India has achieved one of the most rapid absolute reductions in child marriage prevalence of any large developing country over the past two decades. The proportion of women aged 20–24 married before age 18 fell from 47.4% in NFHS-3 (2005–06) to 26.8% in NFHS-4 (2015–16) and further to 23.3% in NFHS-5 (2019–2021) [1]. This 24.1 percentage-point decline over fifteen years has averted millions of early marriages and represents genuine progress toward gender equality. Nevertheless, the remaining burden remains enormous:

approximately 1.5 million girls marry before age 18 each year, with the highest rates concentrated in rural areas of Bihar, West Bengal, Jharkhand, Rajasthan, Uttar Pradesh, and parts of Assam [1,2,3,4]. These regional concentrations underscore that national averages mask deep geographic and social inequalities.

A broad and methodologically diverse literature spanning repeated cross-sectional surveys, district-fixed-effects models, propensity-score matching, instrumental-variable designs, and randomised controlled trials converges on one dominant protective

factor: continued participation in formal education, particularly through the secondary level. Girls who complete secondary education face an 80–85% lower risk of child marriage compared with those who never attended school; each additional year of secondary education is associated with a 6–11 percentage point reduction in prevalence, even after controlling for household wealth, parental education, caste, religion, and regional fixed effects [7,8,9,10]. These associations are remarkably robust across datasets and estimation strategies.

The COVID-19 pandemic represented a severe exogenous shock. Prolonged school closures lasting 18–24 months in many states, coupled with household economic distress, increased both dropout and early marriage risks, particularly among 13–17-year-old girls from marginalised communities [11,15]. Yet states that maintained conditional cash transfer disbursements, community-based tracking mechanisms, or rapid resumption of schooling demonstrated more resilient outcomes. These differential experiences highlight a critical insight: mere access to schooling is insufficient. Sustained retention, instructional quality, and social legitimacy of continued education are what generate the strongest protective effects.

This review synthesises the accumulated evidence up to 2023 to address three central questions. First, through which mechanisms does education most effectively delay marriage? Second, which intervention designs and quality features produce the largest and most sustainable reductions? Third, what structural barriers and emerging challenges must be overcome to realise education's full preventive potential at scale? The analysis draws on five rounds of NFHS data, large-scale programme evaluations, systematic reviews, and district-level studies to argue that secondary education is not merely one strategy among many—it is the central, evidence-based lever for accelerating progress toward SDG target 5.3.

II. THEORETICAL FRAMEWORKS FOR EDUCATION AS PREVENTION

Three complementary theoretical traditions illuminate why and how education functions as a powerful brake on child marriage. The human capital perspective treats additional schooling as an investment that raises a girl's expected future earnings, thereby increasing the opportunity cost of early marriage and early childbearing [20]. In marriage markets characterised by dowry or bride-price systems, prolonged education also

signals higher “quality” in terms of health, skills, and social status, potentially delaying marriage until a better-matched or higher-status partner becomes available [21].

Empowerment and capability approaches emphasise expanding agency and choice. Schooling provides girls with concrete knowledge of legal rights under the Prohibition of Child Marriage Act 2006, reproductive health, negotiation skills, and exposure to alternative life trajectories beyond early marriage and motherhood. These cognitive and psychological resources increase the likelihood that a girl will voice opposition to an unwanted marriage and that her parents will accept her preference to continue studying [22].

Social norms and ecological theories highlight the community-level disruption caused by rising female secondary enrolment and completion rates. When a critical mass of girls in a village, caste group, or religious community remains unmarried until 18–20, the social acceptability of early marriage begins to erode. Visible school continuation acts as a public signal that a family values education for daughters, gradually shifting collective expectations and reducing social sanctions against delayed marriage [19,25]. These three pathways are interdependent rather than mutually exclusive. Behavioural retention creates the temporal and spatial conditions for cognitive gains; cognitive and affective changes, in turn, feed back into normative shifts at household and village levels, producing reinforcing feedback loops that strengthen education's preventive power over time.

III. EMPIRICAL PATTERNS AT NATIONAL AND SUB-NATIONAL LEVELS

Nationally representative data provide the clearest view of the child marriage gradient. The relationship is steep and consistent across successive NFHS rounds. Girls with no schooling show prevalence rates of 48–51%, those with primary education 35–42%, those who complete secondary education 15–21%, and those with higher secondary or above only 4–8% [1,3,16]. The gradient is steepest between primary and secondary completion, underscoring the particular importance of the secondary transition. District-level fixed-effects models and propensity-score matching exercises confirm that most of the association survives extensive controls for household wealth and parental characteristics [8].

State-level heterogeneity remains pronounced. High-burden states such as Bihar and West Bengal have

recorded slower absolute declines despite national momentum, while Rajasthan and Uttar Pradesh have achieved larger reductions through sustained retention policies. Southern states like Kerala demonstrate the long-term protective effect of near-universal female literacy and secondary completion. These patterns reveal that national progress masks deep geographic and social inequalities. States that achieved the largest

absolute reductions combined sustained increases in secondary enrolment with active retention mechanisms, such as conditional cash transfers and community tracking [4,13,14]. The evidence, therefore, suggests that education’s preventive power is not automatic but emerges most strongly when secondary schooling is made accessible, affordable, safe, and socially valued within local contexts.

Table 1: Comparative Effects of Education Levels on Child Marriage Prevalence (NFHS-5 and Supporting Studies)

Education Level Completed	% Married Before 18 (Women 20–24)	Reduction Relative to No Education	Key Sources
No Schooling	48.0–51.0	—	[1,2,31]
Primary (Complete/Incomplete)	35–42	18–27%	[3,32]
Secondary Complete	15–21	58–68%	[7,8,9,33]
Higher Secondary +	4–8	82–90%	[1,34]

IV. INTERVENTION EVIDENCE AND QUALITY MODERATORS

Rigorous evaluations of deliberate interventions reinforce the observational patterns. Secondary retention programmes combined with girl-friendly infrastructure and active monitoring achieve average reductions of 11–16 percentage points. Conditional cash transfer schemes such as Kanyashree in West Bengal and similar initiatives in Rajasthan produce reductions of 7–12 percentage points with favourable benefit-cost ratios [13,37]. Community-based life-skills programmes and youth information centres generate 8–13 percentage point declines by building negotiation skills and legal awareness. Vocational training linked to secondary education shows more modest effects, ranging from 6 to 10 percentage points. Multicomponent interventions that simultaneously address education, gender norms, and economic incentives consistently produce the largest and most

sustainable reductions of 15–22 percentage points [7,17].

Three quality moderators consistently distinguish high-impact programmes from those with limited or short-lived effects. First, active retention mechanisms, such as regular monitoring, re-enrolment drives, provision of bicycles and hostels, outperform one-off financial incentives. Second, gender-transformative content embedded in the curriculum (rights education, negotiation skills, critical reflection on gender norms) produces larger and more durable normative shifts. Third, community legitimacy secured through engagement with panchayats, religious leaders, mothers’ groups, and adolescent girls themselves enhances sustainability and reduces backlash. When these moderators operate together, educational interventions move beyond delaying marriage to transforming the social conditions that make early marriage acceptable.

Table 2: Comparative Effectiveness of Major Intervention Types (Evaluations 2018–2023)

Intervention	Mean Reduction in Prevalence	Benefit-Cost Ratio (where available)	Representative Studies
Secondary Retention + Infrastructure	11–16 pp	13–21	[6,41]
Conditional Cash Transfers	7–12 pp	5–11	[18,37,42]
Life-Skills + Youth Information Centres	8–13 pp	10–15	[32,33,34,43]
Vocational Training Linked to Secondary	6–10 pp	4–6	[35,44]
Multicomponent (Education + Norms + Incentives)	15–22 pp	16–20	[17,36,45]

V. QUALITY INDICATORS IN EDUCATIONAL INTERVENTIONS

High-quality educational interventions share several interlocking conditions that determine whether they deliver meaningful and sustainable reductions in child marriage. Pedagogical alignment is foundational: programmes must explicitly link continued schooling to girls’ rights, future aspirations, and economic independence rather than treating education as a generic good. When this alignment is absent, even well-funded retention schemes produce only temporary delays in marriage. Instructional integration represents a second essential condition: life-skills and rights education must be embedded within the regular secondary curriculum rather than delivered as standalone add-on sessions. Evidence from iterative programme design shows that weaving gender-transformative content into core subjects generates far stronger normative shifts than isolated workshops [7,17].

Teacher capacity and community legitimacy function as the human bridge between policy intention and ground-level impact. Educators trained in gender-sensitive pedagogy and equipped with locally relevant materials are better able to facilitate difficult conversations about early marriage and bodily autonomy. Community engagement, securing buy-in from panchayats, religious leaders, and mothers’ groups, reduces social backlash and increases the perceived legitimacy of delayed marriage [40]. Personalisation and contextual adaptation represent additional quality indicators: programmes that adjust incentives and content to local caste, religious, and economic realities achieve higher retention and greater normative change [36,45]. Finally, robust monitoring and real-time data systems allow implementers to identify dropout risks early and intervene before marriage occurs. When these quality indicators operate in concert, educational interventions become powerful catalysts for both individual agency and community-level norm change; when any one is neglected, even the most promising programmes underperform or produce only short-term effects.

Table 3: Comparative Quality Indicators of Effective Educational Interventions

Quality Indicator	Description	Primary Impact	Supporting Evidence Sources
Pedagogical Alignment	Explicit linkage of schooling to rights and aspirations	Cognitive + Affective (agency)	[7,17]
Instructional Integration	Embedded within regular curriculum	Cognitive + Normative	[32,33,34]
Teacher Capacity & Training	Gender-sensitive pedagogy and local materials	All three dimensions	[8,25]
Community Legitimacy	Engagement with panchayats, leaders, mothers’ groups	Affective + Normative (sustainability)	[40]
Contextual Adaptation	Adjustment to local caste, religion, economic realities	Behavioural + Equity	[36,45]

VI. CHALLENGES AND FUTURE DIRECTIONS

Despite strong evidence and promising interventions, five structural barriers continue to constrain the preventive power of education. Extreme poverty and the perceived short-term economic rationality of early marriage in landless labour households remain powerful counterforces. Deeply entrenched patriarchal norms that position daughters primarily as future wives and daughters-in-law limit parental willingness to invest in secondary education. Chronic shortages of secondary schools, female teachers, and safe sanitation facilities in high-burden districts create practical

barriers to retention. Weak enforcement of the Prohibition of Child Marriage Act 2006 and continued social tolerance of “adjustment marriages” undermine legal protections. The post-COVID period has introduced additional setbacks: learning loss, increased dropout, and economic stress disproportionately affected adolescent girls, temporarily reversing some hard-won gains [11,15].

Future research and policy must address these challenges through several strategic directions. Longitudinal studies that track girls over 10–15 years are needed to understand the durability of education’s

protective effects and the conditions under which early gains are sustained into adulthood. Cost-effectiveness analyses disaggregated by caste, religion, and geography will help policymakers allocate scarce resources more efficiently [6]. Experimental or quasi-experimental studies of digital and blended retention strategies for marginalised girls can identify scalable solutions for remote areas. In-depth qualitative research on the micro-processes of normative change at the village and household level will illuminate how education actually shifts community expectations. Finally, integrated monitoring systems that link school attendance data with child marriage risk indicators at block and district levels are essential for real-time, targeted intervention.

VII. CONCLUSION

The preventive power of education against child marriage in India is now one of the most robust findings in development and gender studies. Secondary schooling does not merely delay marriage; when delivered with quality, retention support, and gender-transformative intent, it simultaneously removes girls from immediate risk, equipping them with the cognitive and emotional resources to exercise agency and gradually reshaping community norms around the appropriate timing of marriage and motherhood. The post-NFHS-5 landscape provides both grounds for cautious optimism and grounds for urgency. India can realistically aim to bring prevalence below 10% by 2030—but only if political and fiscal energy shifts decisively from symbolic legislation and sporadic campaigns toward sustained, high-quality investment in adolescent girls' secondary education embedded in supportive community and policy ecosystems. The evidence is clear. The question that remains is whether Indian society will mobilise the collective will and resources required to realise education's full preventive promise at the scale the country's girls deserve.

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